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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/357,726	07/21/1999	DAVID L. WOOD	SUNM 3633 PUS	9654
51344 7590 07/25/2007 BROOKS KUSHMAN P.C. / SUN / STK 1000 TOWN CENTER, TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075-1238			EXAMINER MOORTHY, ARAVIND K	
			ART UNIT 2131	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/357,726	Applicant(s) WOOD ET AL.	
	Examiner Aravind K. Moorthy	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-12, 17-26, 30-35 and 38-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12, 17-26, 30-35 and 38-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is in response to the arguments filed on 3 May 2007.
2. Claims 10-12, 17-26, 30-35 and 38-59 are pending in the application.
3. Claims 10-12, 17-26, 30-35 and 38-59 have been rejected.
4. Claims 1-9, 13-16, 27-29, 36 and 37 have been cancelled.

Response to Arguments

5. Applicant's arguments, see page 1, filed 3 May 2007, with respect to claim 54 have been fully considered and are persuasive. The rejection of the claim has been withdrawn. As per the interview regarding the rejection under 35 U.S.C. 112, second paragraph, the examiner withdraws the rejection. There are no issues regarding antecedent basis.
6. Regarding the prior art, the Applicant's arguments filed 3 May 2007 have been fully considered but they are not persuasive.

On pages 3 and 4, the applicant argues that Dixon fails to teach all the elements of claims 17, 22, 24, 30, 42 and 55. Specifically, with regard to claim 17, the applicant argues that Dixon fails to teach validating the formatted access request in accordance with the request message specification. The applicant argues that Dixon fails to teach forwarding the validated access request across the security barrier. The applicant argues that Dixon lacks a validated access request.

The examiner respectfully disagrees. Dixon discloses that HTTP transactions can only be initiated by client systems; firewall 140 can be designed to only allow out-going HTTP requests and only allow in-coming HTTP responses that correspond to the out-going HTTP requests.

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Therefore, the firewall only allows HTTP (outgoing and incoming) messages. The message specification is HTTP. The security barrier is firewall 140.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 10, 17-26, 30, 31, 34, 35, 42, 43, 45-47, 51 and 53-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Dixon U.S. Patent No. 6,289,461 B1.

As to claim 10, Dixon discloses that the request and the response message validatings are respectively performed at first and second secure data brokers on opposing sides of the security barrier [column 4 line 58 to column 5 line 4]. Dixon discloses that the validated request and response message transmissions are between the first and second secure data brokers [column 4 line 58 to column 5 line 4].

As to claim 17, Dixon discloses in a networked computing environment, a method of securing access to an information resource behind a security barrier, the method comprising:

predefining a request message specification corresponding to a structured request language [column 6 line 43 to column 7 line 27];

formatting an access request in accordance with the structured request language [column 6 line 43 to column 7 line 27];

supplying the formatted access request to a first intermediary, the intermediary validating the formatted access request in accordance with the request message specification [column 6 line 43 to column 7 line 27]; and

forwarding the validated access request across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 18, Dixon discloses accessing the information resource in accordance with the validated access request [column 6 line 43 to column 7 line 27].

As to claim 19, Dixon discloses a method further comprising:

receiving, at an application proxy, an access request targeting the information resource [column 6 line 43 to column 7 line 27]; and

performing the access request formatting at the application proxy [column 6 line 43 to column 7 line 27].

As to claim 20, Dixon discloses a method further comprising:

predefining a response message specification corresponding to a structured response language [column 6 line 43 to column 7 line 27];

formatting a response to the access request in accordance with the structured language [column 6 line 43 to column 7 line 27];

supplying the formatted response to a second intermediary, the second intermediary validating the formatted response in accordance with the response message specification [column 6 line 43 to column 7 line 27]; and

forwarding a validated response across the security barrier [column 6 line 43 to column 7 line 27].

As to claims 21 and 23, Dixon discloses a method further comprising:

accessing the information resource in accordance with an access request from a client [column 7, lines 28-60]; and
supplying the client with a response in accordance with the validated response [column 7, lines 28-60].

As to claim 22, Dixon discloses in a networked computing environment, a method of securing access to an information resource behind a security barrier, the method comprising:

predefining a response message specification corresponding to a structured response language [column 6 line 43 to column 7 line 27];

formatting a response to an access request targeting the information resource, the formatted response being in accordance with the structured response language [column 6 line 43 to column 7 line 27];

supplying the formatted response to an intermediary, the intermediary validating the formatted response in accordance with the response message specification [column 6 line 43 to column 7 line 27]; and

forwarding a validated response across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 24, Dixon discloses an information security system comprising:

a security barrier [column 6 line 43 to column 7 line 27];

a proxy for an information resource, the proxy and the information resource on opposing first and second sides, respectively, of the security barrier [column 6 line 43 to column 7 line 27];

a data broker on the first side of the security barrier, wherein, in response to an access request targeting the information resource, the data broker validates a request message encoded in a structured request language against a predefined request message specification therefor and forwards only validated request messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 25, Dixon discloses an information security system further comprising:

a second data broker on the second side of the security barrier, wherein, in response to an access targeting the information resource [column 6 line 43 to column 7 line 27], the second data broker validates a response message against a predefined response message specification and forwards only validated response messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 26, Dixon discloses the information resource [column 7, lines 28-60].

As to claim 30, Dixon discloses a computer program product encoded in computer readable media, the computer program product comprising:

data broker code and parser code executable on a first network server separated from an information resource by a security barrier [column 6 line 43 to column 7 line 27];

the data broker code including instructions executable as a first instance thereof to receive access requests in a structured language corresponding to a predefined request message specification and to forward validated ones of the access requests across the security barrier toward the information resource [column 6 line 43 to column 7 line 27]; and

the parser code including instructions executable as a first instance thereof to validate the received access requests against the predefined request message specification [column 6 line 43 to column 7 line 27].

As to claim 31, Dixon discloses an encoding of the predefined request message specification [column 6 line 43 to column 7 line 27].

As to claim 34, Dixon discloses the computer program product further comprising:

application proxy code including instructions executable to format the access requests in accordance with the structured language corresponding to the predefined request message specification [column 6 line 43 to column 7 line 27].

As to claim 35, Dixon discloses the computer program product encoded by or transmitted in at least one computer readable medium selected from the set of a disk, tape or other magnetic, optical, or electronic storage medium and a network, wireline, wireless or other communications medium [column 6 line 43 to column 7 line 27].

As to claim 42, Dixon discloses a method of securing a data transaction across a security barrier, the method comprising:

validating a request message encoded in a structured request language against a predefined request message specification therefor [column 6 line 43 to column 7 line 27];

transmitting the validated request message across the security barrier [column 6 line 43 to column 7 line 27];

validating a response message encoded in a structured response language against a predefined response message specification therefor, the response

message corresponding to the validated request [column 6 line 43 to column 7 line 27]; and

transmitting the validated response message across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 43, Dixon discloses that the request and response message specifications are predefined in accordance with valid request and response message constraints specific to an information resource [column 6 line 43 to column 7 line 27].

As to claim 45, Dixon discloses a method further comprising:

receiving, at an application proxy, an access request targeting an information resource [column 6 line 43 to column 7 line 27];

formatting the request message in a structured language corresponding to the request message specification [column 6 line 43 to column 7 line 27]; and

transmitting the formatted request message to a secure data broker for the request message validating [column 6 line 43 to column 7 line 27].

As to claim 46, Dixon discloses a method further comprising:

formatting the response message in a structured language corresponding to the response message specification [column 6 line 43 to column 7 line 27]; and

transmitting the formatted response message to a secure data broker for the response message validating [column 6 line 43 to column 7 line 27].

As to claim 47, Dixon discloses a method further comprising:

accessing an information resource in accordance with the validated request message [column 7, lines 28-60]; and

preparing the response message in accordance with the access [column 7, lines 28-60].

As to claim 51, Dixon discloses that at least one of the validated request message transmitting and the validated response message transmitting is via a secure protocol [column 7, lines 28-60].

As to claim 53, Dixon discloses that the security barrier includes a firewall [column 3, lines 33-48].

As to claim 54, Dixon discloses that the security barrier includes a secure communication channel between servers [column 3, lines 33-48].

As to claim 55, Dixon discloses in a networked information environment including a client and an information resource separated by a security barrier, an information security system comprising:

means for proxying an access request by the client targeting the information resource and for preparing a request message corresponding to the access request in a structured language corresponding to a predefined request message specification [column 6 line 43 to column 7 line 27];

means for validating the request message against the predefined request message specification and forwarding only validated request messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 56, Dixon discloses means for validating a response message against a predefined response message specification and forwarding only validated response messages across the security barrier [column 6 line 43 to column 7 line 27].

As to claim 57, Dixon discloses an information security system further comprising the security barrier [column 6 line 43 to column 7 line 27].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon U.S. Patent No. 6,289,461 B1 as applied to claim 42 above, and further in view of Ottensooser U.S. Patent No. 5,905,856.

As to claims 11 and 12, Dixon does not teach that the request message validating includes parsing the request message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request message. Dixon does not teach that if the request message is not successfully parsed, forwarding a response message without transmission of the request message across the security barrier. Dixon does not teach that the response message validating includes parsing the response message using Data Type Definitions (DTDs) encoding a hierarchy of tag-value pairs in accordance with syntax of a valid response message.

Ottensooser teaches parsing the request message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request/response message [column 7, lines 58-64; column 10 line 66 to column 11 line 30].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Dixon so that gateway of Borella would have parsed the request message using data type definitions, encoding a hierarch of valid-tag pairs in accordance with the syntax of a valid request message. If the request message were not successfully parsed, an alert message would have been forwarded across the firewall.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Dixon by the teaching of Ottensooser because the structure permits the use of a simple language that allows the user to write a set of tests that closely match the business activities under scrutiny. The language is sufficiently high level so that the user does not have to be involved in the highly technical "behind the scenes" type work that actually tells the computer application what to do. Other products on the market are not as advanced and rely on the skills of computer programmers to write test plans rather than business users [column 13, lines 47-58].

9. Claims 32, 33, 38-41, 48-50, 52, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon U.S. Patent No. 6,289,461 B1 as applied to claims 17, 24, 30 and 42 above, and further in view of Bobo, II U.S. Patent No. 5,870,549.

As to claim 32, Dixon discloses that the data broker code and parser code are also executable on a second network server separated from a client application by the security barrier [column 3, lines 33-48]. Dixon discloses that the data broker code includes instructions executable as a second instance thereof to receive responses corresponding to a predefined response message specification and to forward validated ones of the responses across the security barrier toward the client application [column 3 line 65 to column 4 line 19]. Dixon discloses that

the parser code includes instructions executable as a second instance thereof to validate the received responses against the predefined response message specification [column 3 line 65 to column 4 line 19].

Bobo teaches the translation of messages into XML format [column 21, lines 37-42].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have the gateway as taught by Dixon to format the outgoing packets to the XML structured language.

It would have been obvious to have modified Dixon by the teaching of Bobo because XML is easier to write applications for, easier to understand, and more suited to delivery and inter-operability over the Web [column 21 lines 33-37].

As to claim 33, Dixon teaches an encoding of the predefined response message specification [abstract].

As to claims 38-41, 48-50, 52, 58 and 59, Dixon does not teach that the structured request language includes a markup language. Dixon does not teach that the markup language includes eXtensible markup language.

Bobo teaches the translation of messages into XML format [column 21, lines 37-42].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have the gateway as taught by Dixon to format the outgoing packets to the XML structured language.

It would have been obvious to have modified Dixon by the teaching of Bobo because XML is easier to write applications for, easier to understand, and more suited to delivery and inter-operability over the Web [column 21 lines 33-37].

10. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon U.S. Patent No. 6,289,461 B1 as applied to claim 42 above, and further in view of Applied Cryptography (hereinafter Schneier).

As to claim 3, Dixon does not teach that at least one of the request and response message specifications is cryptographically secured.

Schneier teaches the use and benefits of encryption, page 2.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time invention was made to have modified Dixon so that the request and response messages were cryptographically secured.

It would have been obvious to modify Dixon by the teaching of Schneier because cryptography offers authentication, integrity and nonrepudiation, page 2.

Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K. Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aravind K Moorthy *AM*
July 17, 2007

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